
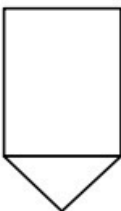

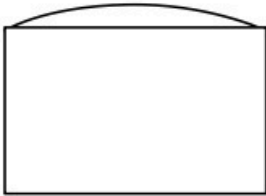
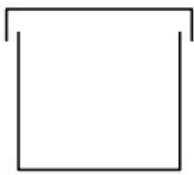
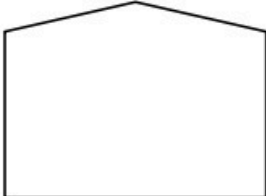
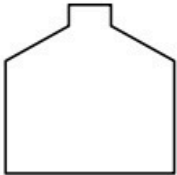
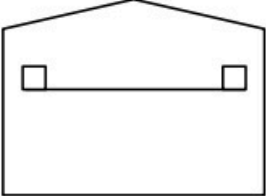

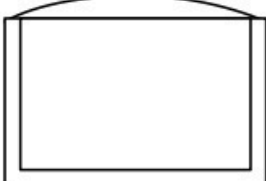
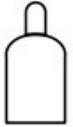
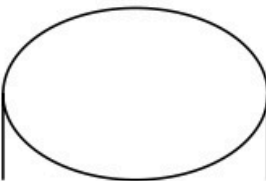



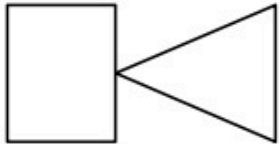
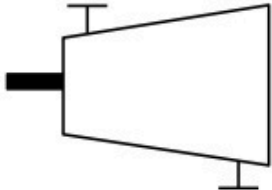
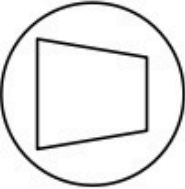


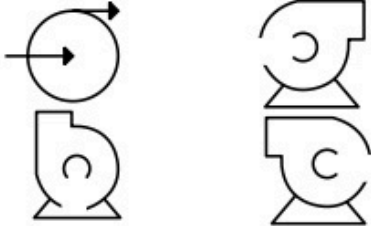
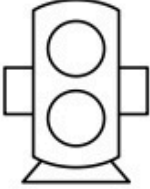
# P&ID

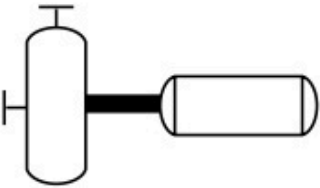
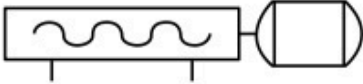
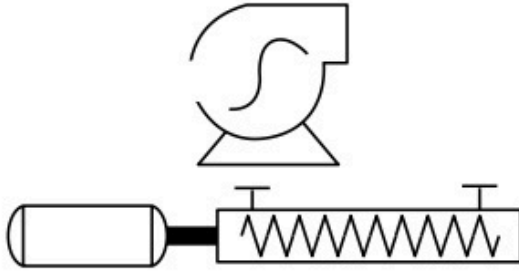
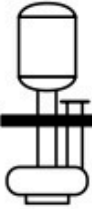
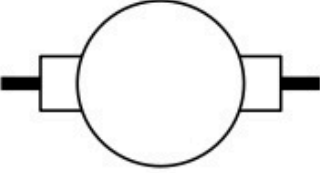
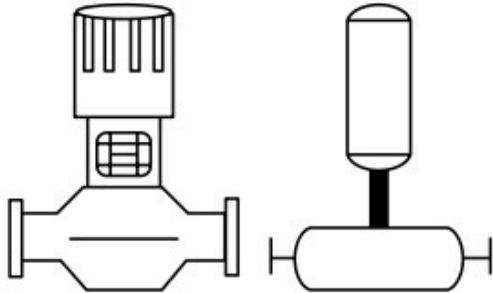
## Symbols & Meanings

### Vessels P&ID Symbols


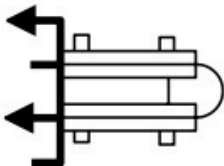
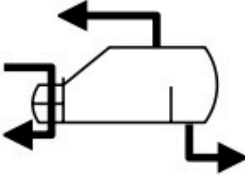

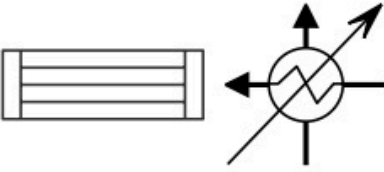


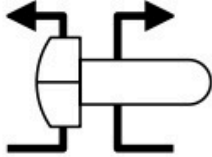



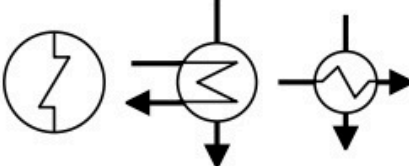
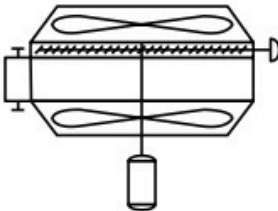
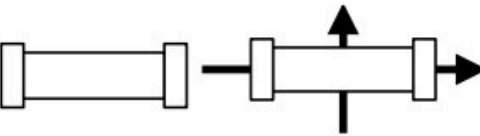

Symbol Name	Symbol	Symbol Name	Symbol
Vertical Vessel		Bin	
Open Tank		Dome Roof Tank	
Covered Tank		Cone Roof Tank	
Tank		Internal Floating Roof	
Tray Column		Double Wall Tank	
Gas Bottle		Onion Tank	
Bag			

## Pumps P&ID Symbols

Symbol Name	Symbol
Ejector	
Turbine Driver	
Motor Driven Turbine	
Triple Fan Blade	
Fan Blades	
Centrifugal Pump	
Gear Pump	

Symbol Name	Symbol
Horizontal Pump	
Cavity Pump	
Screw Pump	
Sump Pump	
Vaccum Pump	
Vertical Pump	

## Heat Exchangers P&ID Symbols

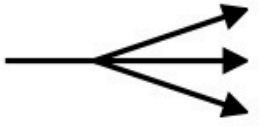
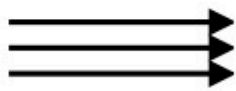





Symbol Name	Symbol	Symbol Name	Symbol
Boiler		Hairpin Exchanger	
Reboiler		Plate & Frame Heat Exchanger	
Condenser		Spiral Heat Exchanger	
Evaporative Condenser		U-tube Heat Exchanger	
Cooling Tower		Double Pipe Heat Exchanger	
Heating Exchanger		Shell & Tube Heat	
Air Cooled Exchanger		Single Pass Heat Exchanger	
		Heater	

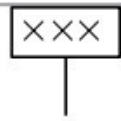

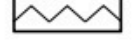







## Compressors P&ID Symbols











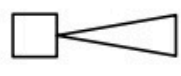
Symbol Name	Symbol
Compressors (COMP)	
COMP, Vacuum Pump	
Centrifugal COMP	
Diaphragm COMP	
Ejector COMP	
Pistol COMP	
Ring COMP	
Roller Vane COMP	
Reciprocating COMP	
Screw COMP	
Screw	

Symbol Name	Symbol
COMP Silencers	
Rotary COMP	
Rotary COMP & Silencers	
Liquid Ring COMP	
Centrifugal COMP	
Selectable COMP	
Axial COMP	
Air COMP	
























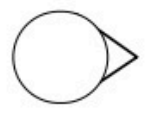
## Piping P&ID Symbols

Symbol Name	Symbol
One to Many	
Multi-lines	
Mid-arrow	
Butt Weld	x
Sonic Signal	
Nuclear	
Pneumatic	//
Hydraulic Signal line	L
Mechanical Link	●
Soldered/Solvent	○
Flange	
Rotary Valve	










Symbol Name	Symbol
End Cap	D
End Cap 2	]
Breather	
Electronically Insulated	
Reducer	
In Line Mixer	
Separator	
Bursting Disc	
Flame Arrester	
Detonation Arrester	
Drain Silencer	
Triangle Separator	 

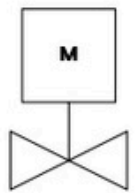
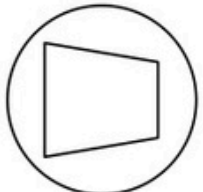

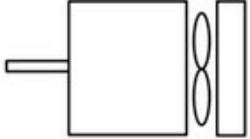
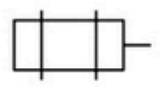
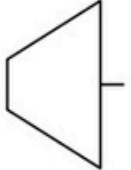
Symbol Name	Symbol
Tundish	<
Open Vent	
Siphon Drain	
Removable Spool	
Y Type Strainer	
Diverter Valve	
Pulsation Dampener	
Duplex Strainer	
Basket Strainer	
Vent Silencer	
Inline Silencer	
Steam Trap	T
Eject or Eductor	

## Valves P&ID Symbols


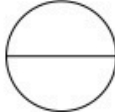

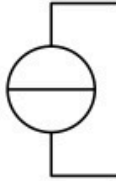









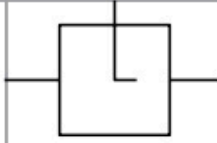
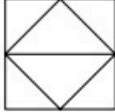



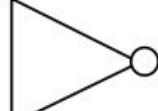


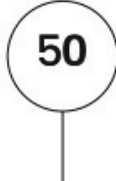

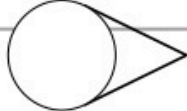
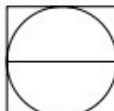


Symbol Name	Symbol	Symbol Name	Symbol
Gate Valve		Check Valve	
Gate Valve Hand Operated		Angle Globe Valve	
Globe Valve		Powered Valve	
Control Valve		Solenoid Valve	
Back Pressure		Hydraulic Valve	
Needle Valve		Motor-operated Valve	
Butterfly Valve		Float-operated Valve	
Ball Valve		3 Way Plug Valve	
Diaphragm		4 Way Plug Valve	
Plug Valve		Guage	
Flange Valve, Hand Operated		Orifice	
Bleeder Valve		Rotameter	

## Motors P&ID Symbols

Symbol Name	Symbol
Motor	
Step Motor	
DC Motor	
AC Motor	
Motor Generator	
Gear	
Generator	
AC Generator	
DC Generator	


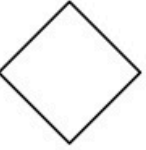

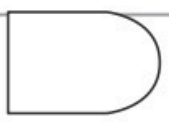



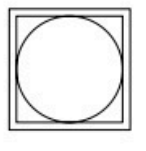

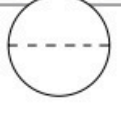
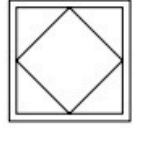
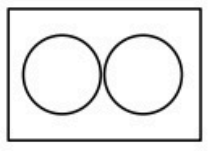
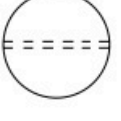
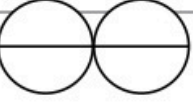

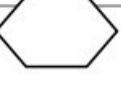

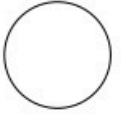
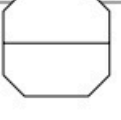





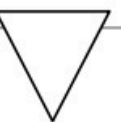



Symbol Name	Symbol
Motor Operated Valve	
Motor Driven Turbine	
Motor	
Diesel Motor	
Electric Motor	
Turbine	

## Instruments P&ID Symbols

Symbol Name	Symbol	Symbol Name	Symbol	Symbol Name	Symbol
Level Indicator		On Central Control Panel		Pressure Indicator	
Level Meter		On Local Control Panel		Pressure Recorder	
Level Recorder		OR Gate		Pressure Recording Controller	
Level Transmitter		Pitot Tube		Pressure Transmitter	
Magnetic		Pitot Tube Type Flow Meter		Programmable Indicator	
Manhole		Pressure Controller		Quick Change Meter	
NOT Gate		Pressure Gauge		Rotary Meter	
Odometer		Pressure Gauges		Rotometer	
Shared Indicator		Pressure Indicating controller		Sampler	



## Instruments P&ID Symbols

Symbol Name	Symbol	Symbol Name	Symbol	Symbol Name	Symbol
Analyzer Transmitter		Diamond		Flow Nozzle Meter	
AND Gate		Diaphragm Meter		Flow Recorder	
Averaging Pitot Tube		Displayed Configurable		Flow Transmitter	
Behind Control		Displayed Programmable Indicator		Flowmeter	
Behind Local Control		Double		Flume Meter	
Computer		Flow Controller		Indicator	
Computer Indicator		Flow Element		Level Alarm	
Coriolis Flow Sensor		Flow Indicator		Level Controller	
Correcting Element		Flow Meter		Level Gauge	
				Straightening Vane	

## Instruments P&ID Symbols

Symbol Name	Symbol	Symbol Name	Symbol	Symbol Name	Symbol
Shared Indicator		Temperature Controller		Ultrasonic Meter	
Socket Connection		Temperature Element		Unit Control Panel	
Specialty Item		Temperature Indicator		V Cone Meter	
Steam Tracer		Temperature Recorder		Venturi	
Support Bracket		Temperature Transmitter		Venturi Meter	
Support Leg		Thermometer		Vortex Sensor	
Support Ring		Thermometers		Wedge Meter	
Support Skirt		Transducer		Weir Meter	
Target Meter		Turbine Meter			